

Semester:	4th	Branch:	Materials and Metallurgical Engineering
<b>END SEMESTER EXAMINATION – May 2023</b>			
Subject Code:	MME0401	Subject Name:	Introduction to Process Metallurgy
Date:	22/05/2023	Time:	2:00 PM To 3 Hrs. 5:00 PM
Day:	Monday	Total Marks:	100

Q.1	A	Explain the drying process in detail with using spray drying as an example.	10
	B	Explain the differences between the calcination and roasting process with examples.	10
Q.2	A	Explain in short: Unit Process, Unit Operation, Cementation, Gaseous Reduction, Solvent Exchange.	10
	B	Explain the process of lead extraction with a flowsheet.	10
Q.3	A	Explain electrometallurgy with a cell design, highlighting each component in detail.	10
	B	Explain the fundamentals of fused salt electrolysis.	10
Q.4	A	What are reaction rates? Explain the factors affecting reaction rates with examples.	10
	B	Explain concentration and rate laws.	10
Q.5		Attempt Any Four	20
	A	Explain in detail the electroplating process with examples and reactions.	05
	B	Explain Faraday's law of electrolysis and give the applications of the same.	05
	C	With a flowsheet, explain extraction of Zinc.	05
	D	Explain the differences between order of reaction and molecularity.	05
	E	Explain the concept of activation energy.	05
	F	Explain reaction-coordinate diagrams in detail.	05